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ABSTRACT

This publication describes the activities, deliberations, and products of a summer, graduate-level workshop in which students met for five consecutive day-long sessions to build on the state of knowledge regarding self-directed learning in terms of needed facilitation and needed learning resources. The first section of the document provides a brief overview of the scope and content of the workshop. After a section of definitions of terms relating to self-directed learning and adult education, summaries are provided of the workshop's three group sessions, which dealt with the following topics: diagnosis of needs, strategies for promoting self-directed learning in the workplace, and techniques for evaluating a person's location on a self-directed and other-directed learning continuum. Each of these group session summaries contains some or all of the following: a statement of purpose, assumptions, conceptual models, and implications. The report concludes with a selected bibliography. Appendixes to the report include a chronology of andragogy pieces or conversations, an annotated bibliography of works dealing with andragogy, lists of workshop participants and staff, workshop information, abstracts of the students' term project papers, a summary of the information presented during the course, and an outline of the editor's decade-long research efforts in the area of self-directed learning. (MN)

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SELF-DIRECTED ADULT LEARNING: SOME IMPLICATIONS FOR FACILITATORS

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Self-Directed Adult Learning:
Some Implications for Facilitators

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1985

*This report is derived from a workshop conducted during the 1985 summer session at Syracuse University, Syracuse, New York. Workshop participants who contributed to this report included Margaret (Peg) E. Chambers, Pat Green, Doris Holdorf, Jane M. Hugo, Barry W. Mack, Dawn P. Mullaney, Lois Needham, Gene A. Roche, Mary C. Rommel, and Jack E. Six. Appendix B provides more information about each participant.

The report is made available to readers through the efforts of students and faculty in adult education at Syracuse University. It is hoped that the information will contribute to dialogue, thinking, and research related to self-directed learning.

Roger Hiemstra
July, 1985

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Foreword

Interest in self-directed learning has been accelerating in the past several years. A number of dissertations, federally funded projects, monographs, and articles have been written during this time. A self-directed learning task force has been created within the North American Commission of Professors of Adult Education (CPAE) and a multitude of related papers are read each year at the Adult Education Research Conference, CPAE Conference, National Adult Education Conference, the Lifelong Learning Research Conference, and at many other conferences both domestically and internationally.

My own work in this area through personal research, reflection, and program demonstration continues to evolve. Elsewhere in this document the reader will find a description of my ten-year research program involving personal research and the research of several students. Several other such dissertations are being conceived. Many of the more recent studies have in some way involved an administration of Guglielmino's Self-Directed Learning Readiness Scale (1977). The recent development of a new instrument related to self-directed learning, the Oddi Continuing Learning Inventory (Oddi, 1985), promises to yield many more dissertations. Ralph Brockett and I developed a chapter related to theory and research in self-directed learning (1985). Ralph and I also are beginning work on a larger manuscript on self-directed learning. Finally, the success of a Weekend Scholar Master's degree program at Syracuse University has demonstrated the viability of an educational effort based on self-directed learning principles (Hiemstra, 1984a).

Subsequently, I felt that another workshop involving people interested in the topic would result through synergistic discussion and dialogue in some useful information. Thus, ten people worked together for one week in an intensive all-day workshop on the broad topic of facilitation and resources in self-directed learning. This publication is a report of our activities, deliberations, and products. We made only a start in understanding some of the issues related to facilitation. Hopefully, our efforts will trigger some subsequent activities. Feedback and interactive discussions are welcome.

I would like to acknowledge the splendid efforts put forth by members of the workshop. Their willingness to ask questions, read into the wee hours, and work together on some "tough" issues was much appreciated. The week was quite productive. I'd also like to thank my colleagues Harriet Estrin, Ken Landers, and Janet Leeb for their helpful contributions as presenters.

Roger Hiemstra
Facilitator
July, 1985

Introduction

Andragogy as a system of ideas, concepts, and approaches to adult learning has become foundational to the thinking of many adult educators. Knowles' contributions to this system are many (1980, 1984). In fact, the dialogue, debate, and subsequent writings related to andragogy have been a healthy stimulant to some of the growth of the adult education field during the past two decades. Appendix A provides both a chronological and annotated bibliography on andragogy.

Parallel and foundational to many of the andragogical assumptions has been the research and thinking on self-directed learning. Actually, the concept of self-directedness in learning, as well as andragogy, appeared in the adult education literature as early as 1926 (Brookfield, 1984a; Lindeman, 1926). From these writings, a beginning description of the self-directed learning phenomenon emerged. Lindeman (1926) talked about it in terms of both learners and teachers:

> Adults are motivated to learn as they experience needs and interests that learning will satisfy . . . adults have a deep need to be self-directing, therefore the role of the teacher is to emerge in a process of mutual inquiry. (p. 16)

This self-directed feature is also recognized as having been present in the thinking of ancient scholars such as Socrates and Aristotle (Tough, 1967). Long (1976) noted that a spirit of self-directedness was prevalent in the adult learning of Colonial America. Kidd (1979) (first published as a book in 1959) used the term "learning force" to describe active, independent learners. Such ideas are at the core of the contemporary chain of studies evolving around self-directed learning.

Fundamental to these contemporary studies and the state of the art about self-directed learning was the pioneering work of Houle (1961). Houle used an interview technique with several learners to develop a motivational typology of learning styles. He discovered that people generally were either goal-oriented, activity-oriented, or learning-oriented. However, as his research was with those involved in formal learning, the notion of self-initiated learning was not conceptualized. The more contemporary research that involved both formal and informal learning prompted the editor to add to the typology a fourth category identified as "the self-reliant, autonomous and independent learner." (Hiemstra, 1984b, p. 35).

The chain of research that followed Houle's work began with a study conducted for the National Opinion Research Center (Johnstone & Rivera. 1965). The researchers used interview techniques to estimate that at least nine million adults in the United States carried out one or more self-instruction projects during the year.

Tough then began some work in 1966 that culminated in 1971 with his seminal work on adults' learning projects (1967, 1979). Using a probing interview technique, Tough determined that most adults spend an average of 700-800 hours in deliberate learning projects each year. Nearly two-thirds of his original sample reported that these projects were self-planned. A number of subsequent studies have been completed that generally substantiated these original findings.

Cross (1977) provided some summary information after looking at several studies conducted prior to 1977. She drew the following conclusions about the learning efforts of adults. Almost every adult undertakes learning each year, with the number of activities falling between three and thirteen. She also noted that there are clear differences between different populations in the time spent and that the majority of such learning is self-planned.

A different approach to examining the self-directed phenomenon was initiated by Gibbons, et al. (1980). Utilizing the biographies of twenty top achievers, the researchers determined that self-directed characteristics such as creativity and self-confidence were common among the subjects. Another approach to measuring self-directed involvement was Guglielmino's (1977) work. She developed a scale to measure characteristics related to self-directed learning styles. Oddi's (1985) more recent instrument is another effort to provide some measures related to the self-directed learning phenomenon.

The above shows a steady progression in the research on and understanding of self-directed learning. The result has been changes in educational practices with adults as learners. Some of this information has been developed into teaching suggestions (Hiemstra, 1980a), some into policy recommendations (Hiemstra, 1980b), some into implications for practice and research (Hiemstra, 1982), and some efforts to glean both theory and practice suggestions (Brookfield, 1985).

The major purpose of the workshop described in this report was to build on the state of knowledge regarding self-directed learning in terms of needed facilitation and needed learning resources. As will be shown later in the report, a variety of areas were touched on and some exciting concepts emerged. However, much more on the subjects of both facilitation and resource development needs to be determined. We have only identified what we believe is the tip of an iceberg, to put it in terms Allen Tough has used before. Hopefully, the workshop and this report will be a stimulus for much additional dialogue, information, research, and knowledge.

The Workshop

An intensive three semester hour graduate-level workshop on self-directed learning was held during the summer session, 1985, on the campus of Syracuse University, Syracuse, New York. A total of ten people representing a wide variety of professional backgrounds, experiences, and interests participated in the workshop. Three colleagues in addition to the instructor (Hiemstra) provided some informational support to class members. Appendix B describes the participants and instructional support group.

Workshop participants met each day for a week from 8:00 a.m. to 4:30 p.m. with a noon-hour lunch break. Considerable time was spent in and out of class in reading, brain storming, discussing, locating resources, and final project development. For those readers interested in duplicating portions of the class process, Appendix C contains a description of the workshop, the requirements, and the approximate schedule followed. Appendix D summarizes the types of individual student term projects.

An interactive process of maximizing participant involvement and contributions was utilized throughout the workshop. This included instructor presentations (see Appendix E), presentations by outside resource people, small and large group discussion, agenda building activities, clarifying discussions, sharing and critiquing small group products, and various evaluation activities. As much as possible within the confines of an institutional-based credit course, self-directed learning activity was encouraged.

A most intriguing aspect of the workshop was to see synergism at work. Interests evolved and merged within the first two days as a variety of possible topics for small group work surfaced. The following topics were considered for possible intensive work by one or more people:

-- Reflective Self-Directed Learning Needs

-- Implementation of Self-Directed Learning Principles in Public Schools

-- Self-Directed Learning Strategies

-- Learning Styles and Resource Needs

-- Self-Directed Learning Opportunities in Traditional Settings

-- Strategies for Rewarding Self-Directed Learning

-- Criteria for Critiquing Self-Directed Learning

Eventually, three groups were formed around the broad categories of diagnosis of needs, strategies for promoting self-directed learning in the work place, and techniques for evaluating where a person was on a self-directed learning and other directed learning continuum. As will be evidenced later in this report, each of these topics continued to evolve as participants worked intensively on them.

Definition of Terms

As small groups deliberated on their specific topics, a variety of terms, words, and concepts emerged that required some definitions in order to build a foundation for communication with others.

assessment ... process of identification of a need

1. internal ... perceived by self (felt-Knowles)

2. external ... perceived by others (ascribed-Knowles)

comfort ... condition resulting from a congruence between the primary learning orientation and situational learning environment

facilitator ... person assisting in needs identification and learning strategies

job enrichment ... basic changes in the content and level of job responsibility so as to provide for the satisfaction of personnel's motivational needs

need ... a gap between present performance and expected performance in one's occupation

primary learning orientation ... an individual's disposition toward learning resulting from personal and experiental variables

reflection ... process of self-examination and evaluation for the purpose of articulating a current and desired state of being

self-directed learners ... people who take primary responsibility for planning, carrying out and evaluating their own learning endeavors

situational learning environment ... conditions under which learning takes place. There are control factors in the environment that assist or block self-directed learning

strategy ... skill or process of planning, organizing and directing all available resources, personnel or courses of action toward reaching certain objectives among contradictory or opposing forces

tension ... a condition of discomfort resulting from a dissonance between the primary learning orientation and the situational learning environment.

Group One - Diagnosis of Need

Assumptions

Prior to the development of some ideas, our group established a set of assumptions to serve as foundational guides for our work.

Where self-directed learning takes place, we believe the following:

1. Self-awareness of needs, free from self-deception, is required.
2. The learning process is internalized.
3. Needs must be internalized by the learner.
4. Organizations have a responsibility for facilitating self-directed learning.
5. Organizations derive numerous long lasting benefit from self-directed learning.

Introduction to Needs

Various definitions of needs and assessments are found in the literature. Needs are frequently defined in psychological and biological terms as in Maslow's Hierarchy of Needs. Another definition is Miller and Verduin's (1979, p. 42) "the stated differences between the "is" and the "should be." Knowles (1980, p. 88) defines them educationally as "something people ought to learn for their own good, for the good of an organization, or for the good of society." For this discussion we have defined need as a gap between present performance and expected performance in one's own occupation as our focus is one's performance in an occupation.

Assessment is thus the process of identification of a need. This may be done formally or informally, by self or, by others. When a person assesses personal needs, it is done from within the self, the person. This we have defined as internal assessment. We have defined assessment from others as external in nature.

Internal assessment allows for privacy and self-honesty. The person may use a variety of means for this assessment - talking with self, using a questionnaire, conversing with peers or others, or something learned from another learning activity. Internal assessment also has limitations. As Smith, Niedzwiedz, Davis, and Kniesner (1984) state "self-observation can be tarnished by the possible lack of self-understanding or (. . . by a) desire to appear in a self-ordained manner" (p. 11).

External assessment is that done by others. This also may be carried out in a variety of ways - observation, questionnaires, inventories, or others listed later in the discussion on resources.

Self-directed learning is dependent upon the internalization of these needs. The following components are necessary for such internalization: desire to change, time to do it, means to do it, reflection on change, and assistance in making changes.

Facilitation

After needs have been assessed, regardless of whether the learning mode is to be self-directed or other-directed in nature, a planning procedure is required to turn needs into goals that can be achieved through learning. It was one of the group's major contentions that a facilitator of some type has an important role to play.

An effective facilitator, or personal assistant in needs identification and in identifying learning strategies, needs to be many things to many people. While facilitation modes will naturally vary, there are certain crucial roles, skills, and attitudes necessary in fostering adult learning. To illustrate such facilitator roles the example of self-directed learning in the job place will be utilized.

Helping an employee identify specific needs designed to improve job performance is one role. Identification of these needs can be initiated by the learner/employee (internal) or by the facilitator or other outside (external) means. Another role of the facilitator is to assist learners/employees in identifying learning strategies appropriate to their personality and needs.

In carrying out the above roles, skill in the following areas are crucial for the facilitator of self-directed learning?

1. ability to recognize personality types and learning styles

2. familiarity with a wide variety of resources, both personal and material

3. skill in helping learners understand and demonstrate a process of learning (learning how to learn)

4. communication skills

5. listening skills

6. decision making ability

7. ability to be a liaison between the learner/employee and other peers, as well as between the learner/employee and management.

An attitude of openness and trust within the place of employment also is imperative for self-directed learning to thrive. Mutual respect, mutual trust, collaboration rather than competition, a sense of support by staff and peers, as well as a sense of humanness are important elements which the facilitator can effect and or implement. The vast resources with which this is done depends on the availability of both personal and material resources.

Resources

Organizations need to provide numerous resource options to aid the occupational growth of all employees. For example, employees need supportive resources for productive learning gains in job skills, habits and attitudes.

These resources need to be accessible during several phases of employee growth. The first phase in such a continuous growth model (see Figure 1) would be an assessment of current performance through a variety of formal and informal tools.

These might include such means as supervisor feedback, peer reviews, a competency rating or an informal self-approval, client feedback, or peer feedback.

The second phase would include the evaluation of expected performances. This might involve such activities as a supervisory evaluation or a self-evaluation.

A recognition of the desired state of performance is the third phase. This phase is created by internal "dissonance" or "tension" which may be triggered by an external event (supervisor evaluation) or internal need such as desire for achievement through promotion in an organization. There also is recognition that self-reflection is a critical element in the individual's decision to learn for better occupational performance. Resources such as models, visitations, learning style inventories, and personality analysis inventories can all be useful during the phase.

The fourth phase is the actual employee's process of learning the new skills, habits, or attitudes. Some of the

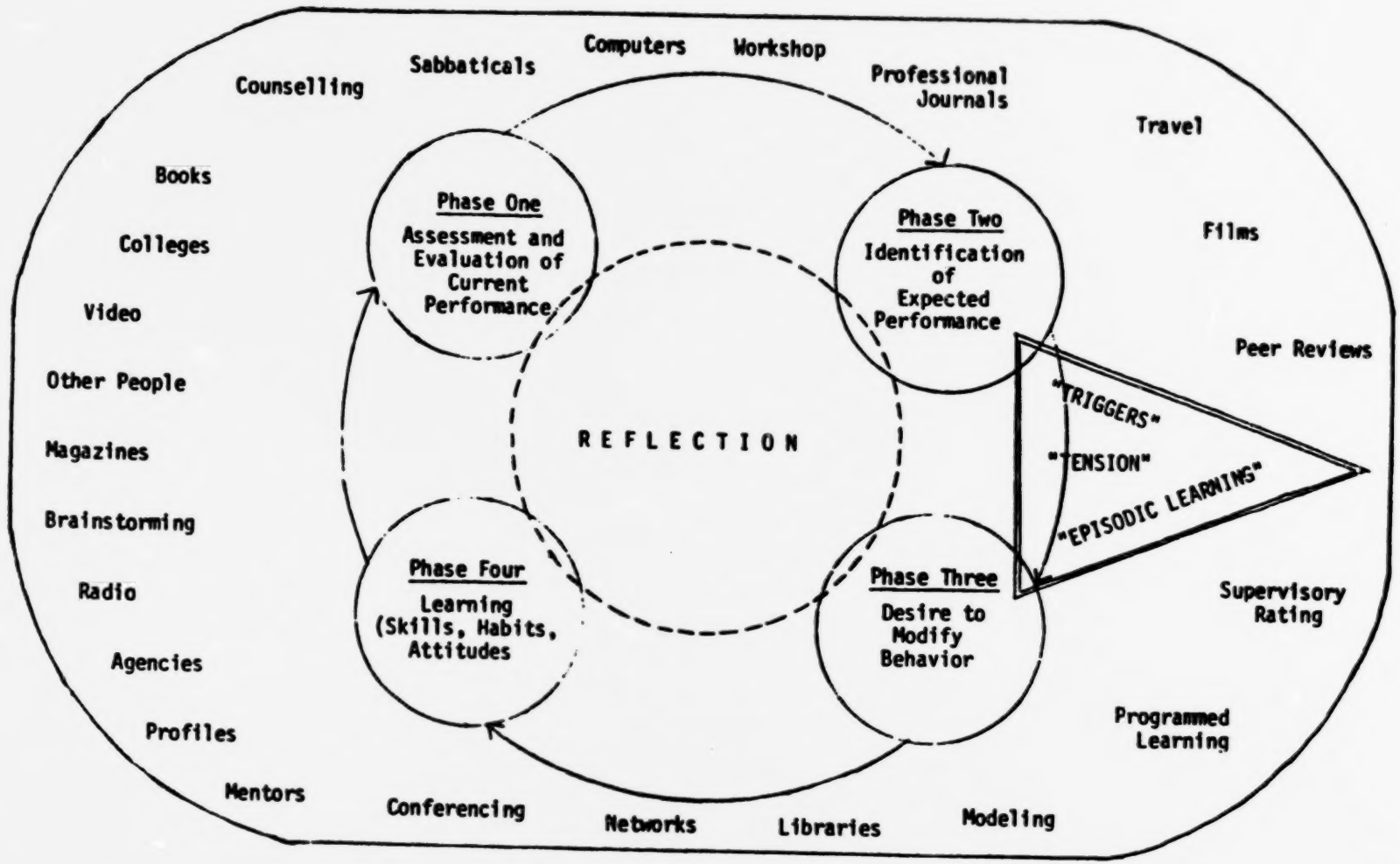


Figure 1. A Self-Directed Learning Change Model

resources which can be useful include video-tapes, conferences, formal classes, books, journals, magazines, resource people, module films, stimulated recall, or workshops.

A facilitator can identify and assist with resources during any of the phases. Figure 2 lists a wide variety of resources that facilitators can utilize to promote self-directed learning.

Reflection

The preceding section of this report referred to the use of instrumentation, persons, and resources as a means for needs assessment. Another section dealt with the role of a facilitator in the process of reflection toward accurate and helpful needs assessment. An obvious omission from the literature of adult learning theory is the uniquely adult function of critical reflectivity which is what makes meaning transformation possible. Prevailing concepts of reflective thinking is limited to interpretation of data, application of fact and principles, and logical reasoning (Knowles, 1975). As Brookfield (1985) notes, "when the techniques of self-directed learning are allied with the adult's quest for critical reflection and the creation of personal meaning after due consideration of a full range of alternative value frameworks and action possibilities, then the most complete form of self-directed learning is exemplified" (p. 15).

Critical reflection appears to be the key in an adult's creation of meaning and ultimately in self-direction.. "For the highest level of individual motivation to be achieved, it is imperative that specific learning needs be self-diagnosed." (Knowles, 1980, p. 227) Where work is related to personal experience and perceived needs and occurs in the context of such experience, the personal investment in the learning effort will be maximized. Most jobs involve orchestration of a great number of factors, continually shifting behaviors designed to respond to the situation. This demand for complex skills, involves more than a mere application of scientific theories. A process of change, of self-directing learning, is required. It most certainly must be more sensitizing than simple measurement. Such a process is ultimately more concerned with the development of goals and setting broad directions than defining terminal behaviors.

Argyris and Schon (1976) characterized the normal world of learning as a "single loop" where people learn to maintain constancy by designing actions that satisfy existing governing variables (goals). Others refer to this same concept in their disussion of establishing routines. If such theory-in-practice remains unexamined indefinitely, our minds will close to much valid information and possibilities for change will be minimal.

Money	Self talk
Time	Television
Films	Competency Ratings
Travel	Profiling
Questionnaires	Classes
Cassette Tapes	Agencies
Critiquing	Learning Projects
Modules	Radio
Peer Review	Other Professionals
Personal Journals	Brainstorming
Various Facilitators	Magazines
Learning Partner	Inventories
Computers	Other People
Consumer Information	Video Tapes
Programmed Learning	Colleges
Subordinates	Books
Modeling	Personality Analysis
Counseling	Literature
Observations	Stimulated Recall
Schools	Clients
Libraries	Workbooks
Mentor	Supervisor
Conferencing	Workshop
Professional Journals	Previous Experiences

Figure 2. Potential Resources for Self-Directed Learners

Double looped learning, on the other hand, involves allowing things which had previously been taken for granted to be seen as problematic and opening oneself to new perspectives and new sources of evidence (Day, 1984, p. 76). If employees are to extend their knowledge about practice, examine their effectiveness and their self-directedness, they need to investigate both their thinking and their practice. Reflection is the step in the process that adds dimension as well as direction to one's learning. It challenges one from operating uncritically with a fixed framework of knowledge. Reflection is the one process that allows and requires divergence from the "technicist perspective." Self-directed learning is predicated on adults' awareness of their separateness and on their consciousness of personal power (Brookfield, 1985), or, as Mezirow (1985) notes, we need to help adults become more aware of what has been taken for granted about their own learning. Self-directed learning is concerned with the internal change of consciousness which involves appreciation of the contextuality and an awareness of belief and operational systems. The purposes of critical reflection are not to establish cause and effect but to increase one's understanding and insight.

Insight requires sufficient self knowledge to evaluate one's own strengths and weaknesses. Reflection brings to light the myriad of variables which are normally filtered out through the development of routines and decision habits. Examining our implicitly unstated knowledge is critical to self-direction. Reflection will occur in the case of certain problematic situations which require a deviation from the routine of activity or where dealing with events is unpredictable. Mezirow's (1980) levels of critical reflectivity include conceptual reflectivity (I am using a sterotype), psychic reflectivity (I am afraid to confront), and theoretical reflectivity (Why am I). Freedom from self deception is necessary to such reflection. It involves examination of the contextual and contingent aspects of reality as well as exploration of alternative perspectives and meaning.

Routines (Clark & Yinger, 1971) which are seldom made explicit or tested, are rarely evaluated in terms of values, assumptions and expectations. Kelly's personal construct theory (Olson, 1984) reveals that only by rendering the tacit knowledge articulate can we gain the advantage of being able to discuss practice and to subject <u>know-how</u> that is in practice to critical scrutiny. His research provides constructs for action via having people articulate what they did and why they did it. Argyris & Schon (1976) adopt the idea that knowing is inherent in action and that the challenge for comprehending and improving professional practice is to make "articulate what is inarticularly" embodied in action itself; the starting point for improvement is practice. Critical reflection on the meaning of one's actions in a contextual frame is recommended. Getting at the tacit, the unstated beliefs is the essense of reflection. Knowledge gained through self-reflective learning is valuable;

action then becomes emancipatory (Brookfield, 1985). This process of articulating one's practical knowledge does not require a research context nor an expert. As noted in the previous section, it might be a peer, an instrument, or a notebook.

This interpretive perspective becomes a source of understanding, of integration. The empiric-analytic perspective, one of observation, frequencies, and inventories, becomes a fragmented view of behaviors. The triangulation, offered through reflection, looking at the same phenomenon from different perspectives, provides a more valid portrait for the individual. Performance can not be wholly conceived as the sum of a limited number of isolated effective behaviors. It is rather to be understood in relation to the intention and contextual complexity. Reliance on empirical and analytical thought tends to place a relatively low value on experiental knowledge, thus rendering some people as unaware of their own knowledge (Elbaz, 1983). Reflection can lead to an internalization. Without such dialogue and consideration, learning relies more on trial and error. Results of reflection can become the impetus for an action plan.

Persons in a survival and competency stage tend not to reach out. Persons in a self-actualizing state reach out to develop themselves and explore more alternatives (McKibben & Joyce, 1983). An employee who is patient and prepared to tolerate the exposure (even to a notebook) of what appear to be feelings and incoherence will find the task personally rewarding in itself (Elbaz, 1983). It is our belief that in a supportive environment, one in which the organization recognizes the responsibility to facilitate critical reflection, employees can become more self-actualized, more self-directed. Reflection makes self-concept so central and the affective dimension of learning plays a critical role. The process of articulating one's practical knowledge must be distinguished from mere talk. Reflection can not be a paint by number scheme. The tools suggested in the previous section, from instruments to inventories, will provide the grounding of the retrospective and prospective questions that stimulate critical reflection. The mutual trust developed between the employee and the facilitator is an equally critical element. If reflection and discussion are as vital to learning as outlined thus far, we believe that organizations must increasingly make time for it. We must legitimize the time and effort devoted to such reflections. The urgency to get on to the next learning, objective, or goal should not be the excuse to neglect or negate the reflective endeavors. We are convinced that the benefit to the organization from creating self-directed learners is immeasurable. The need for reflection as a part of the process of continuing needs assessment, we hope, has been demonstrated.

Implications

Finally, our group spent some time brainstorming on the impact some of our thinking might have on education. Following, therefore, are several implications.

1. Organizations must build time within their structure for assistant employees/learners in all phases of self-directed learning.

2. Organizational hierarchy must be committed to and thoroughly understand the components of self-directed learning.

3. Rewards, intrinsic and extrinsic, must be provided for self-directed learning.

4. More research is needed on implementation within organizations of all self-directed learning phases.

5. Research also is needed on short and long-term benefits of self-directed learning to organizations.

6. Organizations must recognize the critical need and accept responsibility for facilitating reflection.

7. Organizations need to provide opportunities for retrospective and prospective reflection.

Group Two - Self-Directed Learning in the Workplace: A Resource for Promotion, Productivity and Job Enrichment

Purpose

The purpose of this section is to suggest methods by which the principles of self-directed learning can be put to use in the workplace to further learning and to accomplish the goals of the learner and of the organization. Many of the learning projects studied by Tough (1979, 1982) were work related, and, with minimal investments, organizations can enhance the ability of workers to carry out their own learning projects, such efforts not only provide benefits directly related to organizational goals and objectives, but also improve morale, worker satisfaction, and other less quantitative results.

Assumptions

The group established a set of assumptions to guide our deliberations:

1. Organizations of all types will face the continuing pressure of job compression, demands for increased productivity, international competition, the rapid growth

of technology, and the changes, such as job obsolescence, inherent in the move from a manufacturing economy to a service economy.

2. Training and education in a variety of modes will continue to be very important to organizations in meeting these challenges.

3. Programs which will enhance self-directed learning in the workplace will be based more often on the models of Knowles (1980, 1984) and Brookfield (1981, 1984b, 1985) than on that of Tough (1979, 1982).

4. Self-directed learning has many advantages and rewards both for the learners and for the organization:

   a. Emphasizes personal involvement and commitment

   b. Provides individually tailored programs

   c. Builds self-esteem and self-confidence

   d. Offers most direct transfer of training

   e. Can be extremely cost-effective

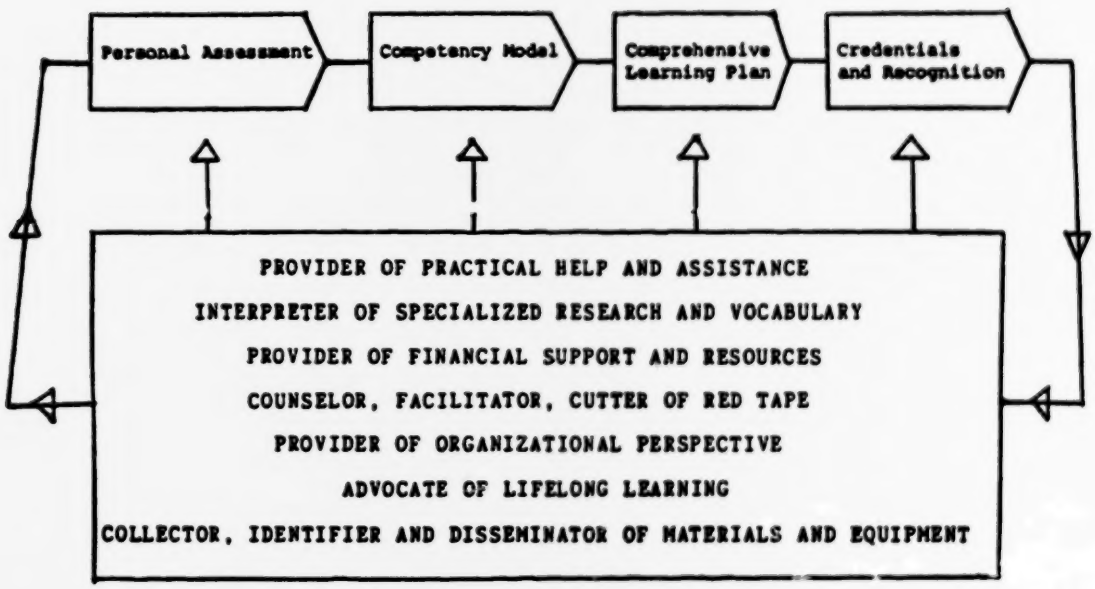
   f. Offers a high degree of learning retention.

A Model of Organizational Support of Self-Directed Learners

Self-directed learning methods in the workplace are not for every worker, nor should they be expected to replace more traditional methods of training. They should be looked upon as valuable enhancements for certain organizational and personal learning needs.

The model we propose (see Figure 3) suggests that organizations accept the role of actively encouraging and supporting self-directed learning projects as important to their overall training and development mission. Many large organizations already possess most of the resources necessary to carry out this function easily and well, but doing so will require a shift in perspective. Organizations must see themselves not so much as needs assessors, instructors, program developers, and classroom managers, but as advocates, counselors, and helpers to individuals moving through cycles of self-directed learning.

The cycle of self-directed learning has been well documented and explored in adult education literature. Learners move from an assessment of their learning needs, form a tentative plan of action or learning plan, carry out the learning plan and evaluate their progress. Our model suggests that the organization take a proactive role, offering resources and assistance in support of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Comprehensive Learning Plan
Credentials and Recognition
PROVIDER OF PRACTICAL HELP AND ASSISTANCE
INTERPRETER OF SPECIALIZED RESEARCH AND VOCABULARY
PROVIDER OF FINANCIAL SUPPORT AND RESOURCES
COUNSELOR, FACILITATOR, CUTTER OF RED TAPE
PROVIDER OF ORGANIZATIONAL PERSPECTIVE
ADVOCATE OF LIFELONG LEARNING
COLLECTOR, IDENTIFIER AND DISSEMINATOR OF MATERIALS AND EQUIPMENT

Figure 3. Supporting the Self-Directed Learner Within the Organization

these steps and, hopefully, helping learners become more effective planners of their own learning.

Such a stance requires helpers who see themselves as advocates of lifelong learning. They must recognize and accept the value of noninstitutional learning, even to the point of allocating educational benefits for self-directed learning projects. Ideally they will be familiar enough with the research and specialized vocabulary of self-directed learning so that they will appreciate the possibilities. Effective helpers in these positions will actively seek to establish contacts with providers of materials and equipment so that they can deal with a tremendous diversity of learning plans, strategies, and outcomes. Finally, and perhaps most importantly, they will be willing counselors, assistants, problem solvers and lifelong learners, themselves.

Resources Available to Learners at Each Stage of the Process

Self-Assessment. Paper and Pencil Inventories, counselors, assessment center techniques, interative video, video tapes, internship and job sharing opportunities, and Computer Assisted Guidance Systems (Super, 1984; Holland, 1973).

Competency Models. Organization charts, job descriptions, standards of performance, biographical material on successful workers, institutional research, counselors, samples of other individual's models, interactive materials and workbooks, and counseling (Knowles, 1975; Collins, 1981).

Learning Plan. Books, interactive material, personal counselors, sample learning plans, directories of audio-visual materials, inter-organization and intra-organizational learning exhanges, feedback, internships and job sharing opportunities, field interviews, mentor programs, and correspondence courses (Gross, 1979; Knowles, 1975).

Credentials and recognition. Internal and external publicity, professional evaluations of learning, directories of degree and certificate granting organizations, corporate advance degrees, promotions, and advancement.

Who Are These Organizations?

A variety of organizations have a stake in helping individuals to become more productive, satisfied in their workplace, and effective in their learning efforts. While the model offered is most easily applicable to training and development departments of large organizations, it is easily adapted to other types of smaller organizations, as well. Individual helpers in the organization need not be highly trained

adult educators. Resource centers for adult learners need not be furnished with all the fancy bells and whistles required for some other types of learning. A few of the other organizations that could easily accept this kind of responsibility for helping learners might include:

-- Corporate HRD Offices

-- Educational Brokerage Organizations

-- Special Interest Groups, from real estate to computers

-- General Interest Support Groups, such as churches and neighborhood groups.

Self-Directed Learning in Action

Following are three simulated examples of people involved in self-directed learning activities:

Jan Smith. Jan has worked for Unitex Corporation (a manufacturer of office furniture) as a secretary for the past 14 months. She now finds her position boring and in her own words, "I must have challenging work." She is seeking a new position outside Unitex as her present employer does not have an opening for which she qualifies or in which she is interested in applying. Her evaluations indicate she is an excellent secretary and Unitex offers her $1,000 additional salary per year if she will stay with the company. Jan accepts but at the end of two more months Jan quits her position with Unitex in search of a more challenging one.

Advocates of Herzberg's two factory theory of motivation (1966) suggest that management can assist many employees in meeting their motivational needs by providing them with more challenging and responsible jobs. According to Herzberg, increasing the level of autonomy, skill variety, task significance, and feedback will lead to a better job performance and more satisfaction. This is known as job enrichment. Obviously, for Jan, money is not a motivator.

Argyris's Maturity Theory (1957) suggests that there is a basic difference between the demands of a mature personality and the demands of many organizations. The mature person such as Jan cannot long remain in the adaptation mode without becoming apathetic or indifferent to the work setting. Jan apparently found this state unbearable and decided to "escape" by quitting. Jan desired a position which would allow her the opportunity to rise to the potential within her, whereas, the typical organization expects a subordinate or person in a support position to

concentrate on the orders given and not question or attempt to understand these orders in a broader perspective. In short, the organization believes its employees are immature.

Had the company been aware and sensitive during the first indication of Jan's dissatisfaction in her work setting, they could have played their role quite differently, perhaps as follows. Through the aid of the human resource department, Jan undergoes a self-analysis whereby her strengths and weaknesses are explored. The self-assessment revealed Jan to be an achievement motivated, inner-directed employee who was capable of autonomy to a large degree. These characteristics in conjunction with that of possessing superior human relations skills gave indication she would probably do very well in the area of sales. While Jan was also adept in psychomotor skills required for a secretarial position, this field did not allow her to utilize her other talents to the degree she desired. The human resource department could then design a competency component in consideration of both organizational and individual goals and help her set appropriate goals. A learning project designed according to Figure 3 would permit her as much latitude as possible in designing the "how, when, and where" of a development process. Finally, the evaluation/recognition function would seek to fulfill her desire for meaningful work by offering her either job enrichment in her present position or the opportunity for movement into a more challenging position internal to the organization. The end result might have been that the organization retained a valuable employee and quite possibly reaped larger unperceived benefits in terms of a more satisfied worker. For Jan, the opportunity for higher achievement through a more demanding position would most likely increase self-worth and add to life satisfaction. The mutual benefit derived could be well worth the effort.

Linda Schafer. Linda is a library aide clerical worker at a technical library in a major governmental research center. She has been working in this position for a couple of years and is beginning to tire of it. She feels that with her educational background, an Associate of Arts degree, she has nowhere to go in the organization and is considering moving to another agency.

Linda decides to take her problem to her supervisor. This particular agency has recently implemented new policies regarding the training of employees. Linda's supervisor agrees to help her assess her needs in conjunction with the organization's needs. A member of the training department is called in to help Linda decide what she would like to learn and where she would like to go with it. After speaking at length with the counselor and completing skills and personality inventories, Linda decides that what she would like to do is become skilled in office management.

With the assistance of others in the organization, Linda formulates a learning plan that will help her in reaching her new goal. Time is set aside from each work week so that she may work with an office manager in another department. The office manager is available to answer questions, give guidance, and offer "hands-on" practical assistance. Linda also decides to take a night course in management at the local vocational center and a free workshop in assertiveness training sponsored by a women's group. Several books are suggested to Linda, so she sets up a reading schedule with those books which are of interest to her. The supervisor at the technical library orders those books that are not already present in the library so that Linda does not need to put much personal money into her learning endeavors. It is also decided that Linda will get together with her supervisor and the training counselor in three months to assess progress, her continued interest, any possible modifications to the plan, and to discuss future employment prospects within various departments.

George. George is an entry level extension agent in a rural community. A bright goal-oriented individual, he would very much like to build his career and progress to more responsible positions. Among his strengths he lists the ability to learn from experience, discipline, good interpersonal skills, and an ability to communicate with a variety of constituencies in small group situations.

George's strengths were confirmed by a special workshop run by his organization during a regularly scheduled convention. Meeting for two hours each morning for five days, the workshop facilitator worked with participants to clarify their goals, values, skills, strengths and weaknesses. Through participation in the workshop, George identified long-range career goals, some possible jobs within the organization that might lead him toward those goals, and two areas of knowledge which he considered critical to success in those positions - accounting/budgeting and public speaking.

Upon his return to the job, George met with his supervisor. They discussed plans for the future and his supervisor agreed with the conclusions. George felt stymied by the fact that the nearest university offering courses in either management accounting or speech was nearly eighty miles away.

Fortunately, George's supervisor had recently traveled to a convention where he had been exposed to self-directed learning. He turned to George and said, "You know, you may not need to have someone teach you in a formal class everything you want to learn - you might be able to learn it on your own."

George was intrigued with the idea, but wasn't quite convinced. Together they explored the things that he had learned over the past years. George was amazed to discover that he had spent nearly 500 hours involved in seven learning projects each year. As they explored these past projects, he discovered many ways to achieve his goals.

Subsequently, his supervisor:

1. Helped him find a corporate accounting manual

2. Assigned him to work with outside auditors

3. Found a friend who owned several audio learning tapes for the non-profit manager

4. Suggested he accept a position as budget chairman at his church

5. Wrote a nice letter to the national office describing George's expertise.

As a result George got asked to give a presentation at the next convention because of his interest in budgeting. He eventually became skilled enough that he was asked to chair a national task force on Extension finance. The future in terms of job advance became much brighter.

Some Final Thoughts

These three scenarios depict only a few of the possibilities when employees and organizations work together on learning needs and activities. The point is that most adult learners would welcome additional help at the work site in planning and carrying out their learning projects if such assistance was readily available. By encouraging self-directed adult learning projects, such as those indicated in the scenarios, organizations would find many employees who:

1. Display greater self-confidence in determining their own developmental needs

2. Look increasingly to their jobs as ways of investing their intellectual energy and achieving personal growth

3. Are able to make more effective transfer of training to the worksite

4. Are able to explore areas of interest to themselves and to their employers which may not be offered in institutional programs.

Ultimately, the institutions will benefit as much as the employer.

Group Three - The Learning Situation

Purpose

Two basic purposes served to guide our efforts:

1. To present conceptual models focusing on the relationships between the learner, the learning situation, strategies, and resources as they relate to self-directed learning.

2. Present implications for practice based on our analysis.

Assumptions

Several assumptions served as foundational guides:

1. Adult educators have an important role to play in self-directed learning.

2. Self-directed learning is one of several modes/contexts of learning.

3. Self-directed learning is not done in a vacuum.

4. The interplay between the learning situation and the learner is the starting point for the development of self-directed learning strategies.

5. One of the educator's roles is to draw upon, adapt, and create strategies and supporting resources consistent with the interplay between situation and learner.

6. A large portion of the learning activities facilitated by an adult educator is intentional on the part of the learner and not simply accidental.

7. Differences in learner, facilitator, and institutional expectations cause tension.

8. Adult educators strive to foster student centered learning.

Conceptual Models

Our group spent a great deal of time developing three conceptual models we believe will be of benefit to researchers, facilitators, administrators, and others as they think about self-directed learning. A fleshing out of these models awaits future dialogue and inquiry.

Figure 4. Figure 4 represents a summary of the two major lines of self-directed learning research. Sphere A illustrates some of the areas of research focusing on the learners disposition toward self-directed learning unique to each learner. Sphere B illustrates some of the areas of research focusing on behavior activities, and process related to self-directed learning. Where the spheres overlap, researchers currently observe, describe, and measure self-directed learning. Up until the present, self-directed learning has been understood, interpreted, and promoted based on that overlap, but it offers potential for expansion through future research.

Figure 5. Figure 5 represents an expansion of the current view of self-directed learning. Spheres A and B remain the two major lines of research to date as illustrated in Figure 4. Sphere C represents the situation in which learning takes place. It consists of the interplay or overlap between situation forces (C-1) and the given environment (C-2). Where Spheres A, B, and C "join," a more comprehensive understanding of self-directed learning becomes possible.

Figure 6. Figure 6 illustrates a detailed articulation of the dynamics of the A, B, and C "union" in Figure 5. The PLOSLE Model has three major components identified as Fields.

Field 1) Primary Learner Orientation equivalent to Sphere A of Figures 4 and 5. It represents the learner's disposition toward the management of his or her learning.

Field 2) Situational Learning Environment equivalent to Sphere B and C of Figure 5. It represents the various learning situations an adult may enter by choice, obligation, or accident. Each situation is composed of forces which affect the individual's learning experience. When these situational forces are interpreted on a control continuum, from self-directed to other-directed, the compatibility between the individual's PLO and SLE can be predicted.

Field 3 represents a way of viewing multiple learning situations adults may be involved with at any one time in terms of their preferred orientation. When learner control needs meet situational control factors, the learner experiences tension or comfort to some degree based on the compatibility of the PLO and the SLE. The large dot on the PLO continuum represents the learner's control orientation and the dot(s) on the LSE continuum(s) represent the situational control factors

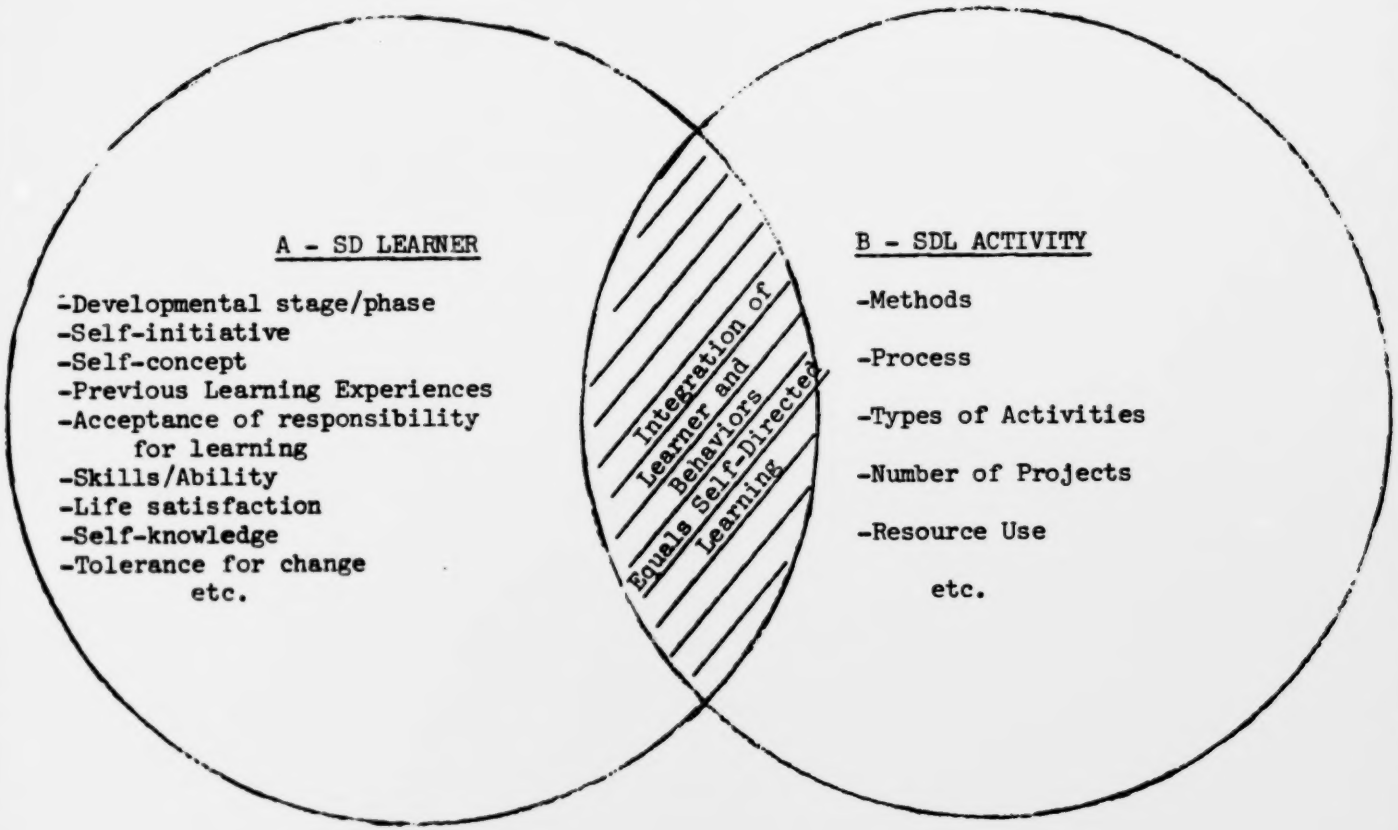
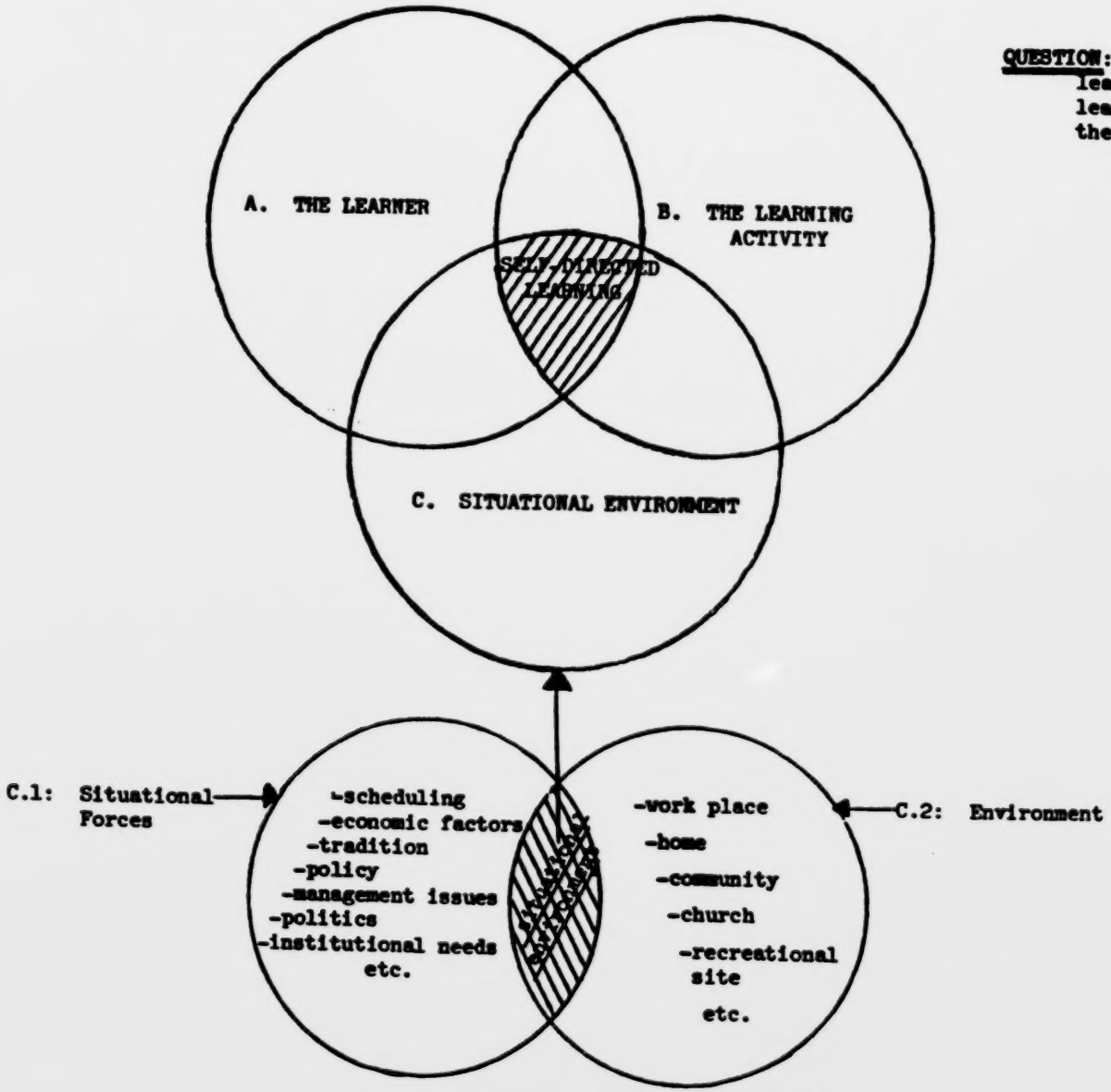


Figure 4. Past Research on Self-Directed Learning



QUESTION: How will the situational learning environment affect learner control throughout the learning process?

Figure 5. Basis for New Model

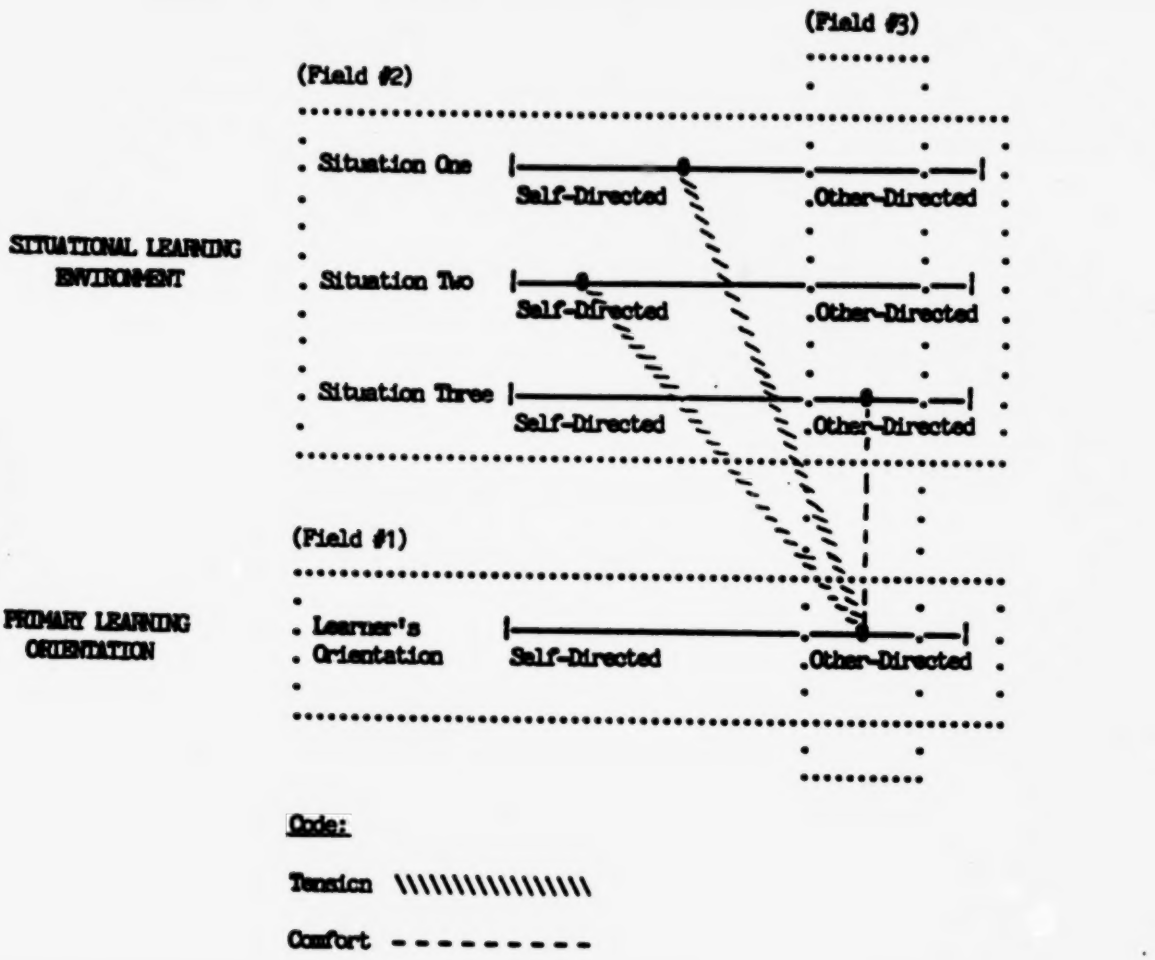


Figure 6. Primary Learning Orientation -- Situational Learning Environment Model for Self-Directed Learning

(THE PLOSLE MODEL)

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present in the learning situation(s). All LSE points outside of Field #3 are potential tension producing learning situations for a learner whose range of adaptability is limited to the width illustrated in Field #3. This does not mean, however, that the limits of Field #3 cannot be moved toward more self-directed or other directed orientations.

Implications

The recognition of potential tension and comfort states arising from the match or mismatch of PLO and LSE has the following implications for both learners and educators concerned with self-directed learning.

1. Adult Educators need skill development in situational analysis, conflict resolution, counseling and advising, learning style diagnosis, and resource adaptation.

2. Learner support services are needed, especially in a PLO analysis and PLO-SLE counseling.

3. Learner/facilitator expectations need to be addressed.

4. Materials and program development will be affected by the three models, especially Figure 6.

5. Recruitment strategies are needed.

6. The role of the educator is not understood very well and additional research is required.

There also are several adaptation strategies a facilitator or agency may employ related to where a person may fall on the primary learning orientation scale (PLO) and the situational learning environment continuum (SLE).

1. PLO Self-Directed — SLE Other Directed

   a. Offer a variety of options.

   b. Offer counseling opportunities.

   c. Have learners contract for portions of the learning.

2. PLO — Other Directed / SLE — Self-Directed

   a. Provide some structure to the learner.

   b. Introduce learners to and walk them through the learning plan.

   c. Offer on-going counseling to learners.

   d. Provide checkpoints and frequent feedback.

   e. Facilitate mentoring opportunities.

3. Field Shift - enlarging the range of the PLO.

   a. Gradually introduce more and more self-directed tasks while providing structured learning (produce tension and monitor it).

   b. Explain what self-directed learning is and what it means to learning and personal growth.

   c. Model the behavior that is desired.

   d. Structure task groups in such a way that the other directed learner is exposed to self-directed learning behavior.

   e. Help learners know their own learning styles and possibilities.

   f. Provide examples/models of materials for developing expected products and behaviors.

   g. Help learners assess learning needs and compatible learning strategies.

Concluding Comments

The fun, excitement, and creative thinking that results from a workshop of the nature described in this report hopefully has been presented. There was considerable overlap between the three groups in terms of ideas because of our large group interactions with each other periodically. However, some intriguing differences evolved as each group struggled to make some sense out of the literature and knowledge on self-directed learning and their own experiences as adult learners. Obviously, more needs to be written about such topics as facilitation, resource development, and the changes required in the educational enterprise. As has been noted before in this document, dialogue is welcome. It is hoped that dissemination through the ERIC system will promote continued thinking, research, and scholarly activity related to self-directed learning.

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APPENDIX A

Chronology of "Andragogy" Pieces or Conversations

1968

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VACCA, R. T., & WALKER, J. E. Andragogy: The missing link in college reading programs. *Lifelong Learning: The Adult Years, 3* (6), 16, 24-25.

1981

CROSS, K. P. *Adults as learners*. San Francisco: Jossey-Bass Publishers.

GRUBBS, J. C. A study of faculty members and students in selected midwestern schools of theology to determine whether their educational orientation is andragogical or pedagogical. (Doctoral dissertation, Oklahoma State University). *Dissertation Abstracts International, 42*, 0055a.

KERMIN, M. A. Using andragogy in an oral communications course. *Community College Review*, 9 (3), 12-14.

SAVICEVIC, D. M. Adult education systems in European Socialist countries: Similarities and differences. In A. M. CHARTERS and Associates, *Comparing adult education worldwide*. San Francisco: Jossey-Bass Publishers.

1982

JONES, G. E. An analysis of the andragogical-pedagogical orientation of selected faculty at Oklahoma State University. (Doctoral dissertation, Oklahoma State University). *Dissertation Abstracts International*, *43*, 2569a.

YEO, G. 'Eldergogy' a specialized approach to education for elders. *Lifelong Learning: The Adult Years*, 5 (5), 4-7.

1983

CHRISTIAN, A. C. A comparative study of the andragogical-pedagogical orientation of military and civilian personnel. (Doctoral dissertation, Oklahoma State University). *Dissertation Abstracts International*, *44*, 0643a.

COURTENAY, B., & STEVENSON, R. Avoiding the threat of gogyomania. *Lifelong Learning: The Adult Years*, 6 (7), 10-11.

HOPKINS, M. A. An analysis of nurse educators' educationl orientation: Andragogical or pedagogical. (Doctoral dissertation, Virginia Polytechnic Institute and State University). *Dissertation Abstracts International*, *35*, 0043a.

RACHAL, J. The andragogy-pedagogy debate: Another voice in the fray. *Lifelong Learning: The Adult Years*, 6 (9), 4-7.

PETERSON, D. A. *Facilitating education for older learners*. San Francisco: Jossey-Bass Publishers.

1984

BOYER, D. L. Malcolm Knowles and Carl Rogers: A comparison of andragogy and student-centered education. *Lifelong Learning: An Omnibus of Practice and Research*, 7 (4), 17-20.

DAVENPORT, J. Adult educators and andragogical-pedagogical orientations: A review of the literature. *Journal of Adult Education*, *12* (2), 9-17.

KNOWLES, M. S., & Associates. *Andragogy in action: Applying modern principles of adult learning*. San Francisco: Jossey-Bass Publishers.

1985

DAVENPORT, J., & DAVENPORT, J. A. A chronology and analysis of the andragogy debate. *Adult Education Quarterly*, *35*, 152-159.

Note: The occasional spelling of andragogy as "androgogy" is as it was found in the source. See Knowles (1980) for an explanation of the spelling variations.

Roger Hiemstra
May, 1985

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BOYER, B. L. (1984). Malcolm Knowles and Carl Rogers: A comparison of andragogy and student-centered education. *Lifelong Learning: An Omnibus of Practice and Research*, 7 (4), 17-20.

He suggests that there are commonalities between the two authors' concepts. For example, both assert that their theories are separate and distinct from traditional education. In addition, humanism is somewhat foundational to both concepts. Rogers comes at his ideas from a psychotherapy background and tends to be more individual and small group oriented. He emphasizes interpersonal and small group dynamics. Knowles' experience base is in informal and continuing education programs and tends to be more supportive of group and larger organizational perspectives. He emphasizes program development.

CARLSON, R. A. (1979). The time of andragogy. *Adult Education, 30*, 53-57.

He suggests that Elias' attack on andragogy does not give much credence to the notions of or possibilities for adult self-directed learning. He supports the notion of facilitating the capable adult learner. He further feels that both a philosophical and political meaning for andragogy must be developed.

COURTENAY, B., & STEVENSON, R. (1983). Avoiding the threat of gogyomania. *Lifelong Learning: The Adult Years*, 6 (7), 10-11.

They talk about all the efforts to label instruction of various groups of individuals by some sort of "gogy." They suggest that the distinctions between various groups are not great enough to warrant a label and certainly not great enough to talk about there being or the need for a related theory. They believe that appropriate program development principles are what is important.

CROSS, K. P. (1981). *Adults as learners*. San Francisco: Jossey-Bass Publishers.

Cross presents her views on the strengths and weaknesses of the andragogical concept. She believes it is closer to a theory of teaching than to a theory of learning.

DAVENPORT, J., & DAVENPORT, J. A. (1985). A chronology and analysis of the andragogy debate. *Adult Education Quarterly, 35*, 152-159.

The authors describe the debate and dialogue that has developed regarding andragogy during the past several years, including some of the dissertations on the subject. Considerable space is devoted to the debate in *Adult Education* that was held over a several year period and to the various "gogy" terms that have been developed. They suggest that it is time we move beyond debate to research.

ELIAS, J. L. (1979). Andragogy revisited. *Adult Education, 29*, 252-255.

He takes the view that the proponents and defenders of andragogy have not proven their case and that there is no sound basis for a distinction between andragogy and pedagogy. He also feels that the slogan "andragogy not pedagogy" is a well intentioned, but inadequate, attempt to enhance the professionalization of adult education. He suggests that andragogy and pedagogy merely represent two different approaches to the education of children and adults.

ELIAS, J. L., & MERRIAM, S. (1980). *Philosophical foundations of adult education*. Huntington, NY: Robert E. Krieger Publishing Company.

They place Knowles into a grouping labeled "humanistic adult educators." They suggest that andragogy is basically a humanistic theoretical framework applied primarily to adult education.

GELFAND, B., & Associates (1975). An andragogical application to the training of social workers. *Journal of Education for Social Work, 11* (3), 55-61.

The authors present a discussion of how andragogical principles can be used in social work training. They highlight some research findings that support various of the andragogical principles.

HIEMSTRA, R. (1976). *Lifelong learning*. Lincoln, Nebraska: Professional Educators Publications.

Hiemstra presents andragogy as an evolving theory area. He suggests that a great deal more research will be required to bring support for and a fuller understanding of the emerging area.

HOLMES, M. R. (1980). Interpersonal behaviors and their relationship to the andragogical and pedagogical orientation of adult educators. *Adult Education, 31*, 18-29.

A research piece in which the author demonstrates some positive relationships between andragogical orientations and perceived effective interpersonal behaviors.

HOULE, C. O. (1972). *The design of education*. San Francisco: Jossey-Bass Publishers.

Houle describes in a couple of locations in the book the fact that he really can't accept the notion that there are real differences between youth and children that warrant a science of andragogy. He also describes the European and other roots of the term.

JAHNS, I. M. (1973). Book review of *Modern practice of adult education*. In *Adult Education, 24*, 72-74.

A fairly straight-forward review, although a little more critical of the technical aspects of the book than was Thornton.

KERWIN, M. A. (1981). Using andragogy in an oral communications course. *Community College Review*, 9 (3), 12-14.

He describes how andragogical techniques were used in a community college communications course. He designed a questionnaire that measures a student's perceptions of an instructor's behavior. The instrument was used pre and post the educational experience to help students think about their own role as teachers.

KNOWLES, M. S. (1973). *The adult learner: A neglected species*. Houston: Gulf Publishing Company.

In a presentation of various learning theories and teaching approaches, Knowles slots in the andragogical model.

KNOWLES, M. S., & Associates (1984). *Andragogy in action: Applying modern principles of adult learning*. San Francisco: Jossey-Bass Publishers.

Two chapters by Knowles (introduction and conclusion) and 36 selections written by 52 authors, five organizational representatives, and some "associates" within seven other chapters grouped according to institutional settings make up this book. The various sections are case study reports of how andragogy or some variations of it has be used.

KNOWLES, M. S. (1968). Andragogy, not pedagogy! *Adult Leadership, 16*, 350-352, 386.

In accepting the Delbert Clark Award in 1967, Knowles laid out his andragogical (as he spelled it then) concepts. He refers to it as a technology, introduces self-concept of the adult, experience of the adult, time perspective, and problem centered education as differentiating factors, and suggests some of the technological (teaching) implications, such as climate, needs diagnosis, planning process, mutual self-directed inquiry, and evaluation.

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KNOWLES, M. (1979). Andragogy revisited part II. *Adult Education, 30*, 52-53.

Knowles suggests that he made a mistake in subtitling *Modern Practice of Adult Education* as "Andragogy versus Pedagogy." He suggests that the title should have been "From Pedagogy to Andragogy" and that his assumptions should have been presented on a continuum. However, he feels that some service came out of the dialogue and debate that was established. A caveat is presented: That an ideological pedagog would want to keep a learner dependent throughout the learning situation whereas a true andragog would want to do everything possible to provide the learner with whatever foundational content needed and then encourage a self-directed process of further inquiry.

KNOWLES, M. S. (1968). How andragogy works in leadership training in the girl scouts. *Adult Leadership, 17*, 161-162, 190-194.

Knowles describes how he tested the andragogical concepts with a leader training program for the girl scouts program. This case study report outlines the steps used and an analysis of the final results.

KNOWLES, M. S. (1970). *Modern practice of adult education: Andragogy versus pedagogy.* Chicago: Follett Publishing Company, Association Press.

In this first version of the book, Knowles lays out the premise of andragogy as an art and science of teaching adults as opposed to what is used to teach children. The book initiated lots of debate, dialogue, and change in terms of instructional approaches.

KNOWLES, M. S. (1980). *Modern practice of adult education: From pedagogy to andragogy.* Revised and updated. Chicago: Follett Publishing Company, Association Press.

In this revised edition, Knowles recognizes the considerable debate that took place since the 1970 version was published and approaches andragogy as an alternative teaching and learning approach, but one that relies on the fact that adults are capable of self-directed learning, as are many youth, but that a person utilizing andragogy as an approach will attempt to move the learner to independent learning as quickly as possible.

KNOWLES, M. (1975). *Self-directed learning.* New York: Association Press.

Although andragogy is mentioned only a very few times in this little book, Knowles actually is utilizing his andragogical principles and process elements as guides in developing the various inquiry projects and learning resource suggestions throughout.

KNUDSON, R. S. (1979). Humanagogy anyone? *Adult Education, 29*, 261-264.

He promotes humanagogy as a theory of learning that takes into account the differences between people of various ages as well as their similarities. It is a human theory of learning as opposed to a theory of child, adult, or elderly learning. The accumulation of experience, for example, is a lifelong process that needs to be considered in educational planning.

KNUDSON, R. S. (1980). An alternative approach to the andragogy/pedagogy issue. *Lifelong Learning: The Adult Years, 3* (8), 8-10.

Knudson suggests that rather than argue the strengths and weaknesses of andragogy or pedagogy based on assumptions about whether or not adults and children are different, we use a law of identity (defining what is meant by being a child independent of what is meant by being an adult) and a theory of emergence (we emerge into adulthood based on experiences we had as a child). He suggests, therefore, that "humanagogy" replace both pedagogy and andragogy. He likens this to a "holistic" approach to adult education.

KULICH, J. (1975). Book review of Poggeler, F. (1974). *Erwachsenenbildung: Einfuhrung in die andragogik* (Handbuch der Erwachsenenbildung, Band 1). (*Adult Education: Introduction to Andragogy. Handbook of Adult Education, Volume 1*). Stuttgart: Verlag W. Kohlhammer. In *Adult Education*, 25, 137-138.

This "international" piece is referenced here just to note that there is literature available from throughout the world related to the word or notion of andragogy.

LEBEL, J. (1978). Beyond andragogy to gerogogy. *Lifelong Learning: The adult years*, 1 (9), 16-18, 24-25.

He suggests the existence of sufficient data supporting and the need for gerogogy and advocated that it should be studied as a theory. He suggests, further, that the concepts imbued within andragogy may be appropriate only up to certain stages of development chronologically.

LONDON, J. (1973). Adult education for the 1970's: Promise or illusion? *Adult Education*, 24, 60-70.

In this essay review of *Modern Practice of Adult Education*, London talks about some of the roles adult educators might play in the 70's. However, he suggests that Knowles' book is largely a technical book which conveys a kind of technicism in referring to adult educators. He describes a problem with the 1970 version in that there is not an effective way of translating the author's discussion into any kind of effective analysis of how adult educators can utilize the presentation of needs into programming which will help adults confront various critical problems facing society. He feels we need more than just methods and techniques to really help adult educators confront some of the major issues of our time. He believes we may need more radical approaches to educating adults, rather than the "sameness" of the technology implied in Knowles' book.

McCULLOUGH, K. O. (1978). Andragogy and community problem solving. *Lifelong Learning: The adult years*, 2 (2), 8-9, 31.

He describes andragogy as a process, a science of teaching adults, and as a profession. He says that the andragogist believes that knowledge is the equalizing factor among people and that people can come to "know" enough through an andragogical process to be a part of community problems solving.

McKENZIE, L. (1977). The issue of andragogy. *Adult Education*, 27, 225-229.

Utilizing an aristotelian approach (classical), a phenomenological approach, and two syllogies, McKenzie provides some philosophical support for andragogy.

McKENZIE, L. (1979). A response to Elias. *Adult Education*, 29, 256-260.

He maintains that adults and children are cardinally different by virtue of different modes of being-in-the-world, that adults and children exhibit different modes of existing, that these modes may be identified through phenomenological analysis, and that the existential differences between adults and children require a strategic differentiation of educational practice. He maintains a notion that Knowles' contrast between andragogy and pedagogy remains a useful but initial effort to explicate an approach to education that is related specifically to adult life.

McTERNAN, E. J. (1974). Andragogical education in the health services. *Adult Leadership*, 23, 136, 148.

He provides a description of how some principles of adult education were utilized in instituting a new master's degree program in the health services area. The author concludes with the notion that their attempt might be a promising model for the reconciliation of andragogy and pedagogy.

MEYER, S. (1977). Andragogy and the aging adult learner. *Educational Gerontology*, 2 (2), 115-122.

This article identifies the basic concepts and structures of pedagogy and andragogy as teaching-learning strategies for aging adults. Andragogy is depicted as a relevant participatory adult education technique useful for aging adults.

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NEWTON, E. S. (1970). Andragogy: Understanding the adult as learner. *Journal of Reading*, 20, 361-363.

He believes that curriculum should be timed to be in step with developmental tasks as the individual encounters them - to make full use of the teachable moment. The requirements and demands of the present situation and aspiring roles in real life must dominate and supersede all other considerations in andragogy.

PETERSON, D. A. (1983). *Facilitating education for older adults.* San Francisco: Jossey-Bass Publishers.

Peterson describes andragogy in context with older learners. He suggests where an understanding of older adults as learners intersects with various andragogical concepts. He also suggests ways andragogy can be applied with older learners.

RACHEL, J. (1983). The andragogy-pedagogy debate: Another voice in the fray. *Lifelong Learning: The Adult Years*, 6 (9), 14-15.

Rachel suggests that adult educators may have become too engrossed in our own jargon and utilizes "andragogy" as a discussional term. He notes how concepts like "self-directed learning" have spun off from the philosophical underpinnings related to andragogy.

SAVICEVIC, D. M. (1981). Adult education systems in European Socialist countries: Similarities and differences. In A. M. Charters and Associates, *Comparing adult education worldwide.* San Francisco: Jossey-Bass Publishers.

The author introduces the reader to the term "anthropogogy" a term that Hungry utilizes to cover both andragogy and pedagogy. He also describes how various other countries in this region use some form of andragogy.

THORNTON, J. A. (1973). Book review of *Modern practice of adult education: Andragogy versus pedagogy.* In *Adult Education, 24*, 70-72.

A fairly straight-forward and positive review of the book.

VACCA, R. T., & WALKER, J. E. (1980). Andragogy: The missing link in college reading programs. *Lifelong Learning: The Adult Years*, 3 (6), 16, 24-25.

The authors talk about how andragogical assumptions and approaches can be used to teach reading to incoming college students.

YEO, G. (1982). 'Eldergogy' a specialized approach to education for elders. *Lifelong Learning: The Adult Years*, 5 (5), 4-7.

She recommends a new "gogy," eldergogy - defined as a specialized approach to education for elders. She believes that eldergogy would help teachers of older adults to become more effective. She provides a number of instruction-related strategies.

Note: The occasional spelling of andragogy as "androgogy" is as it was found in the source. For an explanation of the spelling variations see Knowles (1980).

Roger Hiemstra
March, 1985

APPENDIX B
Participants

Workshop Participants

Margaret E. Chambers R.D. #1, Box 129 Heuvelton, NY 13654	Graduate Student in Adult Education, Syracuse University, and Hospital Inservice Educator
Pat Green 318 Haddonfield Dr. Dewitt, NY 13214	Graduate Student in Adult Education, Syracuse University, and Public School Reading Specialist
Doris Holdorf Management Studies Center Cazenovia College Cazenovia, NY 13035	Chair, Management Studies Center, and Director, Business Management Program, Cazenovia College
Jane M. Hugo 1942 Valley Drive Syracuse, NY 13207	Graduate Student in Adult Education, Syracuse University
Barry W. Mack 45 W. State Street Oxford, NY 13830	Graduate Student in Educational Administration, Syracuse University
Dawn P. Mullaney 156 Fellows Ave. Syracuse, NY 13210	Graduate Student in Adult Education, Syracuse University
Lois Needham 3688 Warners Road Syracuse, NY 13209	Course Chairperson and Instructor, St. Joseph's Hospital School of Nursing
Gene Roche 44 Lincklaen St. Cazenovia, NY 13035	Graduate Student in Adult Education, Syracuse University, and Director of Career Center, Hamilton College
Mary C. Rommel Rose Valley Road Cold Brook, NY 13324	Graduate Student in Educational Administration, Syracuse University, and Director Elementary Education, West Canada Valley Central Schools
Jack E. Six 211 Lafayette Rd. Bldg. III, Apt. 632 Syracuse, NY 13205	Graduate Student in Adult Education, Syracuse University

Workshop Staff

1. Dr. Roger Hiemstra, workshop facilitator, is Professor and Chair, Adult Education, Syracuse University. He has carried out or directed several research studies related to self-directed learning and written extensively on the subject. He presented a variety of information on self-directed learning.

2. Dr. Harriet Estrin, workshop presenter, is a consultant in gerontology and widowhood, Kingston, Rhode Island. A 1985 doctoral graduate in adult education from Syracuse University, Harriet made a presentation on her doctoral research entitled, "Life Satisfaction and Participation in Learning Activities Among Widows" (Estrin, 1985).

3. Mr. Ken Landers, workshop presenter, is a doctoral student in adult education, Syracuse University, and part-time instructor, Maria Regina College. Ken made a presentation on the Oodi instrument and helped workshop participants learn how to use and score it. He is doing a doctoral dissertation involving a comparison of the Oodi instrument with the Guglielmino instrument.

4. Dr. Janet Leeb, workshop presenter, is a professor of nursing, College of Nursing, Syracuse University. A 1983 doctoral graduate in adult education from Syracuse University, Janet made a presentation on her dissertation entitled, "Self-Directed Learning and Growth toward Personal Responsibility: Implication for a Framework for Health Promotion" (Leeb, 1983).

APPENDIX C
Workshop Information

Self-Directed Adult Learning

Introduction

Adult education is an exciting field to study and is equally exciting to be associated with as a workshop participant or as a professional. It is a field that is dynamic, growing, and full of opportunity.

Perhaps the most dynamic area of activity and study is that related to self-directed adult learning. Tough's initial work on adults' learning projects (1979) and the subsequent research of many has resulted in the awesome awareness of how much people are involved with self-directed study and how little prepared professional adult educators are to provide assistance with such study. Needed are new instructional skills, a better understanding of needed roles for adult educators, and policy guidelines for future funding, training, and resource development. Further, Cross in 1981 (Adults as Learners) urged the study of "the improvement of the help and resources available for self-directed learning." (p. 195)

Therefore, the general purpose of this workshop is to obtain a comprehensive view of present research and practice related to self-directed learning and to study implications for the future. The derivation and discussion of needed resources and other recommendations for professional adult educators will be an important activity.

Competency Expectations

At the completion of the workshop, each participant should be able to perform in the following ways:

1. Understand the state of the art regarding knowledge about learning projects and self-directed adult learning.

2. Contribute to the discussion of implications for adult educators and suggest recommendations for future practice.

3. Develop a variety of recommendations for needed resources for self-directed adult learners.

Requirements

1. Participate in the workshop activities and read the available materials. Bibliographic and media reserve lists will be provided. The text requirements are as follows: 1) Roger Hiemstra, Workbook/Supplemental Materials; 2) Malcolm Knowles, Self-Directed Learning; 3) Stephen Brookfield, Ed., Self-Directed Learning: From Theory to Practice, Jossey-Bass New Directions in Continuing Education. In addition, 4) Ron Gross, The Lifelong Learner, is recommended as an excellent supplement.

2. Participate in group activities on developing recommendations for needed resources for the self-directed adult learner. (learning activity #1).

3. Develop a statement of intent (learning contract) relative to the requirements of the workshop. Complete a term project working individually or in groups. This could include interviewing self-directed adult learners, doing extensive readings, or a variety of other activities. A descriptive statement is included.

Note: It is assumed in a graduate level workshop that participants will contract for the grade of A. However, if a lower grade is preferred, discussion with the instructor pertaining to the learning contract will be facilitated.

Learning Activity #1

1. Participate in workshop discussions of self-directed adult learning and read available literature.

2. Join in a small group and work actively and cooperatively. However, "cooperatively" does not imply that disagreement may not take palce. It is assumed that argumentation, defense of beliefs, minority views, and compromising will all take place during the small group work.

3. Within each group a facilitator, recorder, and reporter should be selected. The facilitator works to keep the group discussion on target. The recorder should be a person who can accurately assimilate, synthesize, and record the main points derived during the discussion. The reporter will summarize the primary results to the larger group during the report-back sessions.

4. Utilizing the information presented by the instructor, your readings, and your own beliefs, derive some

product for inclusion in a monograph. The monograph will be distributed through the ERIC system. The product can include such items as actual learning resources (e.g., "How to Use the Library for Individual Learning"), self-directed learning guidelines, directions on how to obtain learning resources, recommendations on the kinds of learning resources that are needed, etc. A group product the equivalent of at least 10 (typed, double-space) pages is the expectation.

Term Project

(Select any one of the following)

A. Select and interview at least five people as to the number of learning projects completed in the past year. (An interview schedule is provided.) Analyze and summarize your findings with enough tables, narrative, and discussion of implications to capture the essence of your interviews.

B. Complete a series of readings necessary to provide you with a comprehensive view of the "state of the art" in self-directed adult learning. Develop a log, diary or some other means of recording your personal ideas, reactions, learnings, and relevant recommendations for change.

C. Carry out some mini-research project that examines theoretically and/or empirically some aspect of self-directed adult learning.

D. Develop a concept paper outlining what some specific agency or group could do to institute basic concepts about self-directed adult learning or related resources into their actual practice.

E. Select some activity of your own choosing that makes "sense" to you in relation to the content of the workshop. Present a write-up on your activity.

Learning Contracts

Utilizing the material contained in the course workbook, the material distributed during the workshop, the information contained in Knowles' (1975) Self-directed learning, or other material of your own choosing, develop and turn in to the instructor a learning contract by the third day of the workshop. The contract should detail your term project and provide any additional information about which you would like feedback from the instructor. Sample contracts will be made available during the workshop.

ATE 600
Self-Directed Learning Workshop
Summer, 1985
Tentative Schedule

Monday, June 24

Introductions

Administrative Details

Registration

Workshop Requirements/Materials

Begin Work on Learning Contracts

Group Formation (as needed)

"Introduction to Self-Directed Learning"

Self-Directed Learning Readiness Scale

Tuesday, June 25

Learning Projects Interviews

General Discussion of Self-Directed Learning

Discussion Regarding the Workshop Monograph

Research Symposium:

Janet Leeb - "Individuals Who Practice Health Conducive Lifestyles and SDLRS"

Ken Landers- "Oodi Instrument"

Dialogue with Presenters

Wednesday, June 26

Research Presentation:

Harriet Estrin - "Widows, Life Satisfaction, and Learning Projects"

Dialogue with Presenter

Small Group Work to Begin Exploration of Self-Directed Learning Needs

End of Day Debriefing

Learning Contracts Due by End of Day

Thursday, June 27

Work Sessions in Small Groups to Develop Information on Self-Directed Learning

Instructor Available as Resource, Facilitator, and Sounding Board

Instructor Begins Work on Monograph

Friday, June 28

Morning:

Presentations by Groups of Monograph Material

Reactions and Feedback

Afternoon:

Fine Tuning on Monograph Material

Instructor Continues Work on Monograph Structure

Workshop Wrap-up and Evaluation

APPENDIX D

Summary of Students' Term Project Papers

Margaret Chambers

An interview, analysis, and comparison of 10-13 people over the age of 55 on a variety of characteristics in relationship to self-planned learning. The Tough interview protocol was utilized to gather data.

Pat Green

Examined learning in terms of what constituted each learning project. Evolved a variety of implications for adult education. The Tough interview protocol was utilized to gather data.

Doris Holdorf

An interview, analysis and comparison of learning projects among a group of adults. The Tough interview protocol with utilized to gather data.

Jane Hugo

Studied the Coterie, a hundred year old women's study group in Fayetteville, New York. The Coterie stimulates personal and intellectual growth through a seven-month program of reading and discussion.

Barry Mack

Modified the Tough interview protocol for a sharper focus on occupationally related learning projects and utilized it with vocational education administrators. The final result was the development of professional development goal sheets.

Dawn Mullaney

Developed an interactive reading log on a variety of literature related to adult and self-directed learning.

Lois Needham

An interview, analysis, and comparison of learning projects among a group of adults. The Tough interview protocol was utilized to gather data.

Gene Roche

Developed an interactive reading log on a variety of literature related to andragogy and self-directed learning.

Mary Rommel

Modified the Tough interview protocol for job related learning projects and interviewed and compared public school administrators. Also interviewed public school teachers to identify resources, methods, and contexts that aid teachers in using critical reflection as a needs assessment tool.

Jack Six

Described the linkage between self-directed learning, adult learning, and andragogical assumptions and the basic principles of adult progressive and humanistic education.

APPENDIX E

A Summary of the Information Presented By the Instructor to Participants

The State of the Art

Houle's pioneering work The Inquiring Mind (1961) inspired work by Tough (1967, 1979), Knowles (1980, 1984), and many others during the past couple of decades. Much of this work has directly or indirectly come to be attached to a line of inquiry and scholarship referred to by many as self-directed learning.

There are two separate but parallel, and often overlapping, streams of work on self-directed learning that have taken place in North America. Allen Tough, a Canadian professor and former doctoral student of Houle's, became interested in the learning oriented person uncovered in Houle research. Tough's early research (1966) analyzed the self-teaching activities of 40 college students. He subsequently became involved in other research and his study of adult's learning projects (1979) laid the foundation for numerous follow-up studies by various researchers. A general pattern has emerged from all this research that can be summarized as follows: approximately 90% of all adults conduct at least one major learning effort, or project, each year; the average is five separate projects annually and 100 hours on each project. Probably relevant to the area of self-directed learning, is the fact that the majority of learning projects, about 70%, are planned by individual learners themselves.

Research replicating the Tough interview technique or utilizing the Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977), a 57-item Likert scale developed to measure one aspect of self-directedness, has been completed by many doctoral students and others in North America during the past decade. Such research has helped to focus considerable educational attention on adult elarning, has demonstrated that considerable learning takes place outside of institutional settings, and has suggested the need for new roles among adult education teachers.

This stream of research and scholarship is not without its critics. Several researchers have added qualitative examinations of "self-directed learners" (Brookfield, 1981; Gibbons, et al, 1980) to the literature. Brockett (1985) has questioned the appropriateness of the SDLRS with certain groups. Brookfield (1984b) provides an extensive criticism regarding the current status of self-directed learning research. This criticism focuses on four main areas: "(1) the emphasis on middle class adults as the sampling frame for studies..., (2) the almost exclusive use of quantitative or quasi-quantitative measures in assessing the extent of learning and the concomitant lack of attention to its quality, (3) the emphasis on the individual

dimensions of such learning to the exclusion of any consideration of the social context in which it occurs, and, finally, (4) to the absence of any extended discussion of the considerable implications raised by these studies for questions of social and political change." (p. 60).

The other stream of work related to self-directed learning also has attracted some criticism. Another leader in the adult education field, Malcolm Knowles, also at one time was a student under Houle's direction. Knowles popularized in North American adult education literature the concept of andragogy (1980, 1984). Andragogy was originally conceived by Knowles as a teaching and learning approach in opposition to pedagogy. A variety of critics (Houle, 1972; London, 1973; and Elias, 1979) suggest that there is no real basis for making distinctions between youth and adults as learners. Knowles, in more recent publications (1979, 1980 and 1984) suggests that andragogy is a teaching and learning system that may work with people of all ages, assuming that an encouragement of student-directed learning is an instructional desire. (See Appendix A for additional information.)

It is this student-directed learning notion or the instructor being seen as a facilitator rather than director of learning that presents this parallel focus on self-directed learning. Knowles in another publication (1975) defines self-directed learning as "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes." (p. 18) Considerably less research thus far has been conducted related to the andragogical side of self-directed learning, so the overlap between the two flows is still somewhat unclear.

During the course of the workshop these two streams of work were explored, as was some of the literature with tangential relationships and some emerging literature that appears related (see the Selected Bibliography). Participants were helped to obtain a general understanding of self-directed learning through reading, discussions, and outside presenters. Individuals who have completed research using the Tough interview protocol or the SDLRS described their work. One person who is beginning work that will explore the relationship of the SDLRS and a new instrument developed to identify self-directed continuing learners (Oddi, 1985) described the latter inventory. Participants had an opportunity to experience first hand all three data collection devices.

Ten-Year Research Program on Self-Directed Adult Learning

The workshop facilitator has engaged in research on self-directed learning for more than a decade. Figure E-1 summarizes this research effort.

Lecturette Topics

A variety of topics or issues were discussed during the workshop. A summary outline follows:

Why Self-Directed Learning?

1. People prefer SDL
2. As result, Tend to be more highly motivated, learn more, and learn better
3. SDL is more in "Tune" with natural psychological development
4. More emphasis today on nontraditional forms of education; thus greater need for SDL skills
5. Need for new definitions of education and learning
6. Need to view education and learning as a lifelong process
7. Need to recognize learning how to learn on one's own as the essential human competence.

Principles and Conditions of Self-Theory

1. Human beings have a natural potential for learning
2. Significant learning takes place when the subject matter is perceived by the learner to be relevant to his/her own purposes
3. Learning that involves a change in self-organization (in the perception of oneself) is threatening, and tends to be resisted
4. Learning that threatens "self" is more easily perceived and assimilated when the external threats are at a minimum
5. When threat to self is low, experience can be perceived in a differentiated way, and learning is enhanced

Year Completed	Name of Researcher	Population Studied	Instruments Used	Main Variables Studied
1975	Hiemstra	Older adults	Tough Interview	# of learning projects Hours of learning Planning preferences
1977	Zangari*	Adult educators	Tough Interview	# of learning projects Hours of learning Planning preferences
1977	Umoren*	Lower socio-econ. group	Tough Interview	# of learning projects Hours of learning Planning preferences
1979	Baghi*	ABE students	Tough Interview	# of learning projects Hours of learning Planning preferences
1979	Sabbaghian*	Adult and non-adult undergraduates	SDLRS (Guglielmino) Bill's Self-concept scale	Comparision of SDLRS and self-concept scores
1980	Hiemstra & colleagues	N.A.	N.A.	Developed policies for self-directed learning
1981	Hassan*	General adult population	SDLRS & Tough Interview	Comparison of SDLRS and learning projects info.
1982	Brockett*	Older adults (frail elderly)	SDLRS Life satisfaftion	Comparison of SDLRS and life satisfaction scores
1982	Hiemstra & colleagues	General adult population	Tough Interview	# of learning projects Hours of learning Planning preferences
1983	Leeb*	Individuals who practice health conducive lifestyles	SDLRS & Personal Wellness Inventory	Comparison of SDLRS and personal wellness scores
1984	Reynolds*	Part-time adult undergraduates	SDLRS EPS (Educational Participation Scale)	Comparison of SDLRS and EPS scores

(Figure E-1, p. 1)

Year Completed	Name of Researcher	Population Studied	Instruments Used	Main Variables Studied
1985	Estrin*	Widows and non-widows	Tough Interview Life satisfaction	Comparison of learning project information according to level of life satisfaction and widows vs. non-widows
1985	McCarthy*	Adult and non-adult undergrads	SDLRS Math Anxiety Scale	Comparison of SDLRS and math anxiety scores
On-going	Middlemiss*	Practicing nurses	SDLRS Job satisfaction	Comparison of SDLRS and job satisfaction scores
On-going	Murphy*	Adult nursing students	SDLRS Educational motivation	Comparison of SDLRS and educational motivation scores
On-going	Landers*	Adult graduate students	Oodi OCLI SDLRS	Comparison of SDLRS and OCLI scores
On-going	Rogers*	Adult under-graduates	Oodi OCLI Cognitive Style Inventory	Comparison of OCLI and cognitive style scores
On-going	Palumbo*	Adult nursing students	SDLRS Self-initiative	Comparison of SDLRS and self-initiative pre and post a self-directed learning promotion treatment

Figure E-1. Ten-Year Research Program on Self-Directed Learning.

* = Doctoral advisee/graduate of Hiemstra.

(Figure E-1, p. 2)

6. Learning is facilitated when the learner participates responsibly in the process

7. Self-initiated learning that involves the whole person (feelings as well as intellect) is the most lasting and pervasive

8. The most useful learning is learning the process by which one learns, a continuing openness to experience, and incorporation of the change process into oneself.

Central Concepts in Tough Research

1. Learning Project: A highly deliberate effort to gain and retain certain definite knowledge and skill, or to change in some other way that takes at least 7 hours of time during the past year.

2. Self as Planner: Approximately 75% of the planning for learning preference is "self."

Method Used by Tough to Collect Data:

1. Structured Interview

2. Probing Questions

Interview Questions Asked by Tough:

1. What did you intentionally do this past year that resulted in any learning?

2. How much time did you spend?

3. Why did you do it?

4. Are you still active?

5. How pleased are you in having learned the information?

6. Who decided what you would learn and how you would learn?

Barriers to adult learning (Cross, 1981)

1. Situational (cost, time, family, transportation, health)

2. Institutional (scheduling, location, registration procedures, admission policies, administrative logistics, lack of information, funding/aid)

3. Dispositional (self-concept, previous education, perceived lack of energy or health, role changes, lack of motivation or interest)

4. Environmental (physical, pace, length, threatening learning situation, dependency on instructor).

Learning variables controlled by the learner

1. Identification of need
2. Topic and purpose
3. Objectives
4. Appropriate learning experience
5. Learning resources
6. Environment
7. Time
8. Pace
9. Evaluation methods
10. Documentation methods.

Some SDAL activities

1. Personal inventigations
2. Self-guided reading
3. Study groups
4. Directed learning
5. Study tours
6. Practicum
7. Correspondence study
8. Self-contained package
9. Programmed instruction
10. CAI modules

Some Benefits

1. Greater transfer of learning from one situation to another
2. Increased retention
3. Greater interest in continued learning
4. Improved self-concept
5. Development of patterns for approaching and solving problems.

Facilitating Roles

1. Encourage assessment of need
2. Encourage setting of objectives
3. Encourage design of learning
4. Encourage evaluation of learning
5. Encourage utilization of evaluation information for future learning

Recommendations

1. Make available a variety of SDAL and non-traditional resources
2. Make available materials and study space in a variety of settings
3. Learners should have easy/quick access to additional resources
4. Develop various flexible self-study materials
5. Develop better methods of helping people identify learning deficiencies and capacities
6. Help learners become more self-directed as learners
7. Create a climate which will stimulate continuous learning.